



## SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 20 81 84 14

Classification of the application (IPC):  
C12N 5/071, A61K 35/407, A61P 1/16, C12N 5/00

Technical fields searched (IPC):  
C12N, A61K, A61P

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	WO 2017149025 A1 (KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN [NL]) 08 September 2017 (2017-09-08) * claims 1-20 *	1-5, 11-15
X Y	WO 2015173425 A1 (KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN [NL]) 19 November 2015 (2015-11-19) * claims 1-34; figure 8 *	11, 12 1-5, 11-15
X Y	WO 2014124527 A1 (UNIV HEALTH NETWORK [CA]; HOSPITAL FOR SICK CHILDREN [CA]) 21 August 2014 (2014-08-21) * paragraph [0249]; figures 8-17 *	11, 12 1-5, 11-15
Y	<b>M. C. NOSTRO ET AL:</b> "Stage-specific signaling through TGF family members and WNT regulates patterning and pancreatic specification of human pluripotent stem cells" <i>DEVELOPMENT</i> , 01 March 2011 (2011-03-01), vol. 138, no. 5, DOI: 10.1242/dev.055236, ISSN: 0950-1991, pages 861-871, XP055063429 * page 862, column 1, paragraph 2 *	1-5, 11-15
Y	<b>S. OGAWA ET AL:</b> "Three-dimensional culture and cAMP signaling promote the maturation of human pluripotent stem cell-derived hepatocytes" <i>DEVELOPMENT</i> GB 16 July 2013 (2013-07-16), vol. 140, no. 15, DOI: 10.1242/dev.090266, ISSN: 0950-1991, pages 3285-3296, XP055282004 * page 3286, column 1, paragraph 2 *	1-5, 11-15

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 11 May 2023	Examiner Novak-Giese, Sabine
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### CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone	P: intermediate document
Y: particularly relevant if combined with another document of the same category	T: theory or principle underlying the invention
A: technological background	E: earlier patent document, but published on, or after the filing date
O: non-written disclosure	D: document cited in the application
& : member of the same patent family, corresponding document	L: document cited for other reasons

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### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-5, 13-15(completely); 11, 12(partially)

Invention 1 relates to a method of expanding hepatoblasts, respectively methods of cryopreserving liver cells or recovering cryopreserved liver cells.

2. claims: 6, 7(completely); 11, 12(partially)

Invention 2 relates to a method of obtaining mature hepatocytes.

3. claims: 8-10(completely); 11, 12(partially)

Invention 3 relates to a method of producing zone 1 hepatocytes, zone 3 hepatocytes, or cholangiocytes

None of the further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for those parts of the European patent application which relate to the first mentioned in the claims, namely claims: 1-5, 13-15(completely); 11, 12(partially)

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 11 May 2023	Examiner Novak-Giese, Sabine
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### CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone	P: intermediate document
Y: particularly relevant if combined with another document of the same category	T: theory or principle underlying the invention
A: technological background	E: earlier patent document, but published on, or after the filing date
O: non-written disclosure	D: document cited in the application
& : member of the same patent family, corresponding document	L: document cited for other reasons

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## ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 20 81 84 14

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 11-05-2023  
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